Commonwealth of Kentucky
Division for Air Quality

PROPOSED PERMIT STATEMENT OF BASIS

PROPOSED TITLE V PERMIT NO. V-02-020 (REVISION 2)
AK STEEL CORPORATION
ASHLAND KY.
AUGUST 2, 2004
BRIAN SMITH, REVIEWER
PLANT I.D. # 021-019-00005
APPLICATION LOG # 56476

CURRENT STATUS:

On July 2, 2004, the Division issued a preliminary determination on the Title V permit for AK Steel Corporation in Ashland, Kentucky. This permit was made available for public review and comment. The public comment period for this action ended on August 4, 2004 and included comments from AK Steel. The Division's response to all comments received is attached in a separate document. Changes to the permit are described below; these changes corrected errors in the draft permit and do not result in increases to any plant-wide emissions or operating caps.

In conclusion, a thorough analysis has been made of all relevant information available that pertains to this source. The Division has concluded that compliance with the terms of the permit will ensure compliance with all air quality requirements. Therefore, it is the Division's determination that a proposed Title V permit should be issued as conditioned. The U.S. EPA has 45 days from the date of this issuance to submit comments. If no comments are received during this period, the Division will issue the permit final as conditioned. With this issuance, all open permit applications have now been addressed. Any modifications must be submitted in their entirety to be considered for review.

CREDIBLE EVIDENCE:
The permit described in this document contains provisions that require specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

CHANGES TO INDIVIDUAL UNIT, OPERATION OR ACTIVITY EMISSION AND OPERATING CAPS:

EP#111, EIS#111 - Flare
Applicable Regulations: Revised to include only 401 KAR 63:015, "Flares". The Division has determined that the process gas stream regulation does not apply to this emission point.
Specific Monitoring, Recordkeeping, and Reporting Requirements:

> AK Steel believes there is no regulatory basis for the current requirements in the permit. They request that these requirements be modified to allow for the operation of a thermocouple to indicate the presence of a flame instead. The Division agrees with this assessment and has revised the permit accordingly.

Specific Control Equipment Operating Conditions:

AK Steel believes that these requirements in the draft permit should be deleted because 40 CFR 60.18 applies only to control devices used to comply with Parts 60 and 61. AK Steel is not subject to any of these requirements. The Division agrees with this assessment and has removed these requirements from the permit.

EP#112, EIS#112 - Cooling Tower
The Division added 401 KAR 59:010 as an applicable regulation.

EP#113 & 114, EIS#113 & 114 - Preheat Stations
No changes were made to this emission point.

EP#115, EIS#115 - Alloy Transfer System and Vacuum Degasser
Specific Emission Limitations:

The total particulate and PM_{10} emission limitations in the draft permit are incorrect. The numbers should be 2.92 tons per 12 consecutive months instead of 5.43 tons per 12 consecutive months. The Division has revised the permit accordingly.

EP#89, EIS#89 - Slab Caster
No changes were made to this emission point.

EP#04, EIS#04 - Amanda Flare
Applicable Regulations: Revised to include only 401 KAR 63:015, "Flares". The Division has determined that the process gas stream regulation does not apply to this emission point.
Specific Monitoring, Recordkeeping, and Reporting Requirements:

AK Steel believes there is no regulatory basis for the current requirements in the permit. They request that these requirements be modified to allow for the operation of a thermocouple to indicate the presence of a flame instead. The Division agrees with this assessment and has revised the permit accordingly.

Specific Control Equipment Operating Conditions:

AK Steel believes that these requirements in the draft permit should be deleted because 40 CFR 60.18 applies only to control devices used to comply with Parts 60 and 61. AK Steel is not subject to any of these requirements. The Division agrees with this assessment and has removed these requirements from the permit.

CHANGES TO PLANT-WIDE EMISSION AND OPERATING CAPS:
No changes were made in this area.

DETAILED UNIT DESCRIPTIONS AND BASIS FOR CHANGES TO DRAFT PERMIT:

EP#111, EIS#111 - Flare
The flare is used to combust excess carbon monoxide from the degasser. Natural gas is used to assist in the combustion of CO. CO emission factors are based on a material balance, assuming a destruction efficiency of 99% at the flare. Natural gas emission factors are taken from AP-42.
Applicable Regulations: 401 KAR 63:015, "Flares"

The reasoning behind changes to the draft permit is explained above under the heading "Changes to Individual Unit, Operation or Activity Emission and Operating Caps".

EP#112, EIS#112 - Cooling Tower
This is a cooling tower associated with the new vacuum degasser. CO emission factors are based on

data from another steel company. Particulate emission factors are based on engineering estimates from AK Steel.
Applicable Regulations: 401 KAR 59:010, New process operations.

Visible emission limitations and monitoring were incorporated into the permit pursuant to 401 KAR 59:010.

EP#113 & 114, EIS#113 & 114 - Preheat Stations
Emissions from the two preheat stations are a result of natural gas combustion. AP-42 emission factors were used.
Applicable Regulations: 401 KAR 59:010, "New process operations"

No changes were made to this point.

EP#115, EIS#115 - Alloy Transfer System and Vacuum Degasser
The alloy transfer system is part of the degasser itself. Particulate emission factors come from material balance calculations. Emissions are ducted to a baghouse with a control efficiency of 99%.
Applicable Regulations: 401 KAR 59:010, "New process operations"

The reasoning behind significant changes to the draft permit is explained above under the heading "Changes to Individual Unit, Operation or Activity Emission and Operating Caps".

EP#89, EIS#89 - Slab Caster
The continuous slab caster is made up of three machine points: the tundish station, the combustion of natural gas to keep the tundish hot, and the torch cutting process. A tundish is a big metal container which holds molten steel. Emission factors are based on engineering estimates. Natural gas emission factors come from AP-42.
Applicable Regulations: 401 KAR 59:010, "New process operations"

No changes were made to this emission point.

EP#04, EIS#04 - Amanda Flare
The flare is used to combust excess blast furnace gas. Previously approved emission factors for blast furnace gas combustion are used.
Applicable Regulations: 401 KAR 63:015, "Flares"

The reasoning behind significant changes to the draft permit is explained above under the heading "Changes to Individual Unit, Operation or Activity Emission and Operating Caps".